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PUBLIC SECTOR ASSISTANCE FOR HOUSING RENOVATION: AN ECONOMIC PERSPECTIVE

prepared for Canada Mortgage and Housing Corporation

by

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INTRODUCTION

The Government of Canada, principally through the Canada Mortgage and Housing Corporation (CMHC) plays an important role in the country's housing markets. The purpose of this paper is to focus on one particular set of programs, those providing public assistance for the renovation of privately owned dwellings.

The major program in this group is RRAP - the Residential Rehabilitation Assistance Program. It is important, first of all, in financial terms. As a result of changes announced in the April 19, 1983 Budget, RRAP commitments of $165 million are authorized for 1983-84. RRAP is also significant in terms of the number of housing unit renovations it assists. In 1982, 38,288 dwelling units were renovated with the aid of RRAP. Most of these units (27,343) were owner-occupied, about 9,000 of which were in urban areas. The remainder of the RRAP loans financed the rehabilitation of rental and non-profit dwelling units. RRAP will be the focus of this paper. However, the general conclusions will also be pertinent to other programs providing renovation subsidies such as the Canada Home Renovation Plan (CHRP).

The objective of this paper is to explore two possible basic rationales for public sector intervention in aid of housing renovation - to achieve an efficient allocation of society's resources (or alternatively, to correct an otherwise existing inefficiency) and to redistribute income in accord with prevailing societal norms. These two rationales are discussed in order in the first two parts of this paper.[1]

A secondary purpose is to indicate the type of assistance program that would be appropriate in those cases where we find a rationale for public intervention does exist. These recommended design features will then be compared to the existing design of RRAP. This discussion is the subject of Part III.

I. EFFICIENCY CONCERNS

In order to approach the issue of government housing rehabilitation in a systematic fashion, we begin with a model of the housing market. Perhaps more accurately, what follows should be called a model of a model; its structure is deliberately kept as simple as possible while still permitting us to address a number of interesting and relevant questions.

Following the Lancaster approach to consumer theory, the market value of a dwelling (V) can be represented as the composite present value of the stream of services flowing from its attributes. Specifically,

$$V = F(S_i, W_j, L, N_k) \qquad (1)$$

$$i = 1, \ldots, n.$$

$$j = 1, \ldots, m.$$

$$k = 1, \ldots, q.$$

where the S_i represent the structural attributes of the dwelling, W_j the visible or cosmetic attributes, L is lot size and the N_k are neighbourhood effects. Among the latter we include locational variables and a measure of the quality of houses in the immediate neighbourhood.

The distinction between structural and "cosmetic" attributes is not completely clear cut. It is nonetheless a useful distinction for our purposes because the types of renovations that can be financed through RRAP are restricted. These include structural, electrical, plumbing, heating and fire safety improvements.[2] We define these collectively as structural attributes (S_i). The visible or cosmetic attributes (W_j),

in contrast, include items not eligible for RRAP but which still may contribute to house values (e.g., interior and some exterior decorating, configuration of living space).

The N_k variables are included to capture effects of two sorts. There is a great deal of evidence that location affects value - both location relative to major employment centres (e.g. CBD) and location relative to important public services, most particularly schools (but also, for example, public parks). Secondly, empirical evidence also indicates that externalities exist in the form of immediate neighbourhood effects. The market value of one house is influenced by the condition and attractiveness of those around it.

The individual or family that owns and occupies a dwelling, of course, must incur costs. We take two views of these costs - financial and economic or opportunity costs.

The financial cost of home occupancy is:

$$C_F = r_1 P + T(V) + O + M + r_2 R \qquad (2)$$

where

C_F = annual financial cost,

P = mortgage principal outstanding,

$T(V)$ = annual property tax, which may be dependent on the property value,

O = annual operating costs (e.g. heating, electricity, water),

M = annual "out-of-pocket" maintenance costs,

R = renovation expenditures,

r_1, r_2 = interest rates.

The relationship between M and R in equation (2) merits some comment. There is no clear threshold beyond which a maintenance expense becomes a renovation project. We make the distinction in a narrow rather than a general fashion, with an eye to the issues at hand. Expenditures eligible for assistance under RRAP are included in R; other expenditures are classified as M. The variable M may thus include expenditures on items that would commonly be viewed as renovations but do not qualify for assistance under RRAP.

Opportunity or economic cost is:

$$C_E = rV + T(V) + O \qquad (3)$$

where C_E = annual economic (opportunity) cost,

r = opportunity cost (interest rate) of capital to the homeowner,

and the other variables are as defined previously. To complete the specification of economic costs we must also define the relationship between maintenance/renovation and market value. This is done as follows:

$$S_i = (1-\delta_s)\ \tilde{S}_i + \alpha_s M + \gamma_s R \quad ; \quad i = 1, \ldots, n. \qquad (4)$$

and

$$W_j = (1-\delta_w)\ \tilde{S}_j + \alpha_w M + \gamma_w R \quad ; \quad j = 1, \ldots, m. \qquad (5)$$

where

$\tilde{S}_i$, $\tilde{W}_j$ = values of S_i and W_j respectively at the start of the period,

δ_S, δ_W = real rates of depreciation,

$\alpha_S, \alpha_W, \gamma_S, \gamma_W \geq 0$ = proportionality factors.

Equations (4) and (5) imply that M and R expenditures contribute to market value (V) by contributing to the quality of the S and W attributes of the dwelling. In part, these expenditures offset physical depreciation of the attributes, and, in part, they may result in net improvements.

The relationship between a structural renovation and dwelling unit market price is therefore:

$$\frac{\partial V}{\partial S_i}\frac{\partial Si}{\partial R} = \gamma_S \frac{\partial V}{\partial S_i} \qquad (6)$$

The coefficient γ_S can thus be interpreted as defining the proportion of renovation costs for a given structural attribute that are reflected in house values.[3]

We can now proceed to discuss the behaviour of homeowners in the market, particularly with respect to renovation activity. Our objective is to examine possible efficiency related rationales for government assistance to private renovation.

A representative homeowner will derive utility from the services (attributes) of a dwelling unit and will choose to undertake a pattern of expenditures that will maximize his/her utility. If this homeowner's decisions also reflect prevailing market tastes then, presumably, this

pattern of housing expenditures will also affect attributes in a manner that will maximally increase market price (V). Of particular interest to us are the expenditures on maintenance (M) and renovation (R) directed towards physical attributes of the dwelling (S and W).

There are three general forms of "market failure" that may justify public sector intervention in the form of rehabilitation assistance. These are 1) capital market imperfections, 2) housing externalities, and 3) information problems.

Before proceeding to our discussion of these factors, however, it is interesting to comment briefly on the property tax variable T(V) in equations (2) and (3). If municipal property taxes are related in some fashion to the market values of properties, then renovations that increase V will also lead to increases in T. This relationship is, of course, a disincentive to renovate. Federal or provincial programs intended to stimulate renovation can thus be viewed, in part, as mechanisms to counteract this tax disincentive. Moreover, these renovation assistance programs then become (again, in part) a revenue transfer system from the federal or provincial government to the municipal governments. While this point is an interesting one, we should not become unduly occupied with it because its impact in quantitative terms is likely to be relatively small.

Capital Market Imperfections

One argument in support of government rehabilitation assistance would be that homeowners are unable to secure credit financing at rates commensurate with the risk they present. Housing market activity is therefore inefficiently restricted. There are several types of capital market inefficiencies we may consider.

First, the credit problem may involve the housing market in general rather than only renovation activity. One way of expressing this problem in terms of our variables is that

$$r < \begin{cases} r_1 \\ (\\ r_2 \end{cases}$$

after adjustment for risk and the costs of financial intermediation. That is, the cost of housing capital to the individual homeowner is greater than the rate of return he/she can earn on savings (again allowing for the adjustments). It was exactly this line of argument that led, in part, to the establishment of CMHC in 1946 and justified its role in mortgage financing.

If it is still valid, an argument along these lines would justify a general program of loans and/or loan guarantees in support of housing. Assistance should be available on the same terms to purchasers of new houses, purchasers of existing dwellings and owners desiring to renovate their units. Whether this assistance was provided through one or several programs would not be particularly material, as long as the terms of the aid were essentially the same.

A second type of capital market problem would exist if $r_1 < r_2$. In this case homeowners would not have access to credit for renovation purposes on the same terms as for mortgage financing. A situation like this is somewhat difficult to envision. For example, if lenders were generally reluctant to advance funds for renovation because the dwellings involved were old or otherwise perceived to involve high risks, then presumably the mortgage availability (measured in terms of r_1) for

these dwellings would be similarly affected. More plausibly, if other government programs exist to subsidize mortgage interest rates, a "wedge" could exist between r_1 and r_2. In this case, one might argue that prior capital market intervention (for whatever reason) necessitates a further intervention to achieve or to restore efficiency. Again, the type of intervention required would be a program to make renovation funds available to homeowners on the same terms as other housing capital (i.e. to bring about $r_1 = r_2$).

Finally, what evidence is there that capital market inefficiencies of the sort described in this section actually exist? It is well beyond the purview of this paper to undertake an analysis of the residential mortgage market. However, a review of the recent literature in the field,[4] does not uncover much evidence of the type of problems discussed in this section. While there are definite problems in the mortgage market, principally resulting from high and variable rates of inflation, they do not uniquely affect housing in general or housing renovation in particular. For example, homeowners with sufficient equity in their dwellings can, in most cases, resort to mortgage financing for purposes of renovation (i.e., $r_1 = r_2$). In other cases banks and other financial institutions offer "home improvement loans" although in some cases these involve higher interest rates (and shorter amortization periods) than mortgages. Whether these higher rates indicate capital market inefficiencies or reflect higher risks is unclear. In short, while capital market imperfections involving housing rehabilitation may exist, their actual existence remains to be demonstrated.

Housing Externalities

Positive housing externalities exist if the private cost of renovations exceed the social costs or if the social benefits exceed the private benefits. In either case some form of public sector assistance to private renovators would be justified.

In the case of the first externality the financial cost (R) to the private renovator is greater than the social opportunity cost. There is only one circumstance in which this is likely. If the workers hired to carry out the renovations would be otherwise unemployed, the wages paid to them will likely exceed opportunity or economic costs. In this case, a subsidy to individuals undertaking renovation may be warranted. The type of program design appropriate to this case would be one in which the amount of subsidization varies with the level of unemployment, either nationally or regionally. A forgivable loan or grant would be an appropriate form of subsidy but it should not vary according to the income of the homeowner.[5]

The second type of housing externality arises when the renovation of one unit adds to the market value (V) of another. This impact would occur through the variables N_k in equation (1). If part of the benefits of one homeowner's renovation project accrue to his/her neighbours, and if the first homeowner cannot capture these benefits, then he/she will decide to undertake less than the socially optimal amount of renovation. The argument would similarly follow for all homeowners.[6]

Would government intervention be justified in this case? In part, the answer depends upon the link between V and N_k $(\partial V/\partial N_k)$ and upon

the link between the renovation of one unit (R) and the relevant N_k variables of another neighbouring dwelling. As for the first link, empirical studies provide some evidence of a statistically significant correlation between house values and visible environmental attributes (e.g. parks, open areas, appearance of other houses on the street).[7] However, the evidence also indicates that the effect is not particularly large; for example, location with respect to employment centres and very good (or bad) schools appears to have a much larger impact.

The second link (between R and N_k of different dwellings) is more problematical. The relevant factors in N_k are, for the most part, externally visible attributes. A good deal of renovation activities do not affect external characteristics. For example, electrical rewiring, plumbing modernization and interior structural work are unlikely to have significant neighbourhood effects. As another illustration we note that, except in extreme cases, fire insurance companies do not vary premiums in relation to the fire safety levels of neighbouring units.

Considering all of the factors involving the N_k variables, a solid case for government renovation assistance does not emerge. The series of linkages needed to support an intervention argument is simply too tenuous.

Information Problems

A third category of market imperfections that may justify public intervention is a serious lack of information. Individual homeowners may choose to undertake less than the optimal amount of renovation because the improvements may be reflected in V inadequately. If market participants were better informed about the impact of these improvements

on the expected useful life of the dwelling and the level of housing services, the market prices (V) would rise accordingly. As a result, the proper incentive would exist for private decision-makers to undertake optimal investments in renovation.

In this section, we analyze informational problems as a potential rationale for public sector housing rehabilitation assistance. At first glance, anecdotal evidence is mixed. A popular adage applied to homeowners' housing renovations is: "you will never get your money out". The implication is that the housing mrket does not adequately capitalize housing improvements. On the other hand, we commonly observe individuals buying dwellings, renovating them and subsequently selling them. The fact that many individuals engage in this activity on a continual basis suggests that it is (for them) a profitable activity; that, in turn, suggests the market is prepared to pay for renovation.

In terms of the model sketched above, the information question centres around the parameter values in equation (6). Do the S_i and W_j attributes contribute to V sufficiently to reflect their costs? An individual will undertake renovation if

$$\gamma_s \frac{\partial V}{\partial S_i} \geq R \quad \text{or} \quad \gamma_w \frac{\partial V}{\partial W_j} \geq R$$

If these conditions do not hold because of misperceptions of the S_i and W_j variables, renovation that would occur with correct perceptions, may, in actuality, not take place.

If misperceptions are a problem, it is likely to involve some

attributes more than others. In particular, we may speculate that the contribution to housing quality of less visible, more technical, "structural" characteristics (S_i) will not be fully appreciated and that readily observable, "taste" attributes (W_j) will be accurately perceived. That is, $\frac{\partial V}{\partial S_i} \cdot \frac{S_i}{V} < \frac{\partial V}{\partial W_j} \cdot \frac{W_j}{V}$

Whether this asymmetric informational problem does, in fact, occur and is quantitatively important, is an empirical question beyond the limits of this paper. However, if an effect such as that described above does exist, it would justify a program to subsidize particular types of renovation.

Other Efficiency Issues

Thus far, the discussion has focused on the possibility of using a public subsidization program to correct inefficiencies in a private market. To conclude this part of the paper, we briefly examine two ways in which a public subsidy program itself may introduce inefficiencies.

The first issue is the relationship between the S_i and the W_j attributes. In the previous section we dealt with the possibility that the former attributes, but not the latter, were subject to misperceptions by market participants. If so, an assistance program restricting the range of eligible activities is called for. However, what if information asymmetries do not exist? Then a program that discriminates between S_i and W_j variables may actually introduce inefficiencies by distorting private decisions away from the optimal.

The second question involves the relationship between maintenance (M) and renovation (R) expenditures. We have already noted that they may be very closely related. A program that subsidizes activities defined as R may induce homeowners to spend less on M, the close substitute. In a real sense then, the program would not be inducing a net increase in R, ceteris paribus, but would be encouraging substitution from M to R activities.

This question revolves around the degree of substitutability between the two activities, which we may define as the relative sizes of the α and γ coefficients. In some cases they are poor substitutes; for example, it is difficult to conceive of maintenance work in lieu of replacing outdated plumbing or inadequate electrical wiring. In cases involving the dwelling structure itself, substitution may be more realistic.

In general, both issues raised in this section (and other similar ones) arise because of restrictions placed upon the assistance program. If an overall objective of the program is to improve the quality of existing dwellings, then a more general program would be more neutral with respect to issues like distorting the type of renovation chosen and the choice between maintenance and renovation, or between types of renovation. On the other hand, the ability to target the program would diminish.

A difficult trade-off problem thus exists. Program designers must make a choice. The more a program is targeted to specific groups, the more restrictive it must be. The consequence is that private decision-makers may adjust their own behaviour in an attempt to become

members of the target group. This dilemma is certainly not unique to RRAP but unfortunately it is one that RRAP cannot escape.

Summary

In this part of the paper we have reviewed aspects of the capital and housing markets that may lead to inefficient allocations with respect to housing renovation. In particular, we were concerned with problems in the markets that may lead individuals to undertake less than the optimal quantity of renovation, thus establishing a rationale for government subsidization.

In general, the conclusion that emerges is that compelling arguments for large scale intervention do not exist, at least for efficiency reasons. No significant evidence points to problems in the capital market that would restrict private renovation below its optimal level. In the housing market itself the most significant externality is likely to arise from the presence of unemployed labour. Informational gaps quite possibly exist, but their impact on renovation activity remains to be established. Finally, we saw that a renovation assistance program itself may create inefficiencies if it is made too restrictive in an attempt to serve a target population.

II. EQUITY

The promotion of equity is the second possible major rationale for public sector intervention in housing rehabilitation. In this part of the paper we explore the general issue of using housing policy as an instrument of redistribution and the particulars of using RRAP in this way. The fact that RRAP includes forgivable loans (grants) that vary inversely with income, clearly reflects a redistributive thrust of the program. Is this objective appropriate? If so, is the use of RRAP a sensible way to pursue this objective?

Second-Best Redistribution?

Economic theory is clear that restricted redistribution or redistribution in kind is inferior to unrestricted transfers of income. For a given cost, a target population can be made better off through general income transfers than through assistance tied to the consumption of specified goods or services. Alternatively, a given amount of benefits (in terms of welfare or utility) can be delivered more cheaply to the target group by using unrestricted income transfers than by using in-kind transfers.[8]

Thus, if we wish to redistribute efficiently - i.e. to impose the least cost upon the donors to attain a given real level of assistance to the recipients - the policy prescription is clear. Pursue equity objectives by employing general income transfers. Governments should not rely upon housing assistance or food subsidies or other commodity-specific programs in pursuit of redistribution.

While this conclusion is a strong one, it is dependent upon certain assumptions. Of most relevance for us, it (implicitly) assumes away the existing system of redistributive programs; in isolation, an income transfer will always dominate a particular scheme to redistribute in kind. However, does the same conclusion emerge if we consider a conditional redistribution program in a world in which many other such programs already exist? Many government programs (at all levels) are in place to redistribute income conditionally. Several of these involve housing, including public housing, rental assistance, first-time home buyer grants, and AHOP, to name a few. A bit further removed but also relevant in this context are provincial rent control schemes. Many of these programs have existed for many years and are likely to continue into the foreseeable future. Given these facts and expectations, what can we conclude about measures like RRAP on equity grounds?

Let us consider this question in terms of both vertical and horizontal equity. A specific conditional assistance program may be said to promote vertical equity if, in its absence, some individuals or families with higher incomes than the target group were receiving as much or more public assistance through other measures. We can thus view the program as "filling a gap" in the overall pattern of vertical redistribution that other instruments are collectively bringing about. For example, in the area of housing, we might argue that programs exist to pursue vertical equity among renters and first-time home buyers but that these programs do nothing to aid existing homeowners who have lower incomes than those being subsidized. Therefore, there is a rationale for another redistributive housing program conditioned so as to serve this last group of low income homeowners.

A horizontal equity problem may be said to exist if some individuals or families are receiving substantially different amounts of public subsidization through various programs than other individuals or families in similar economic circumstances. To continue with housing, if, for example, renters at a given level of income are being subsidized (by means of rental assistance or rent controls) while homeowners at the same income level are not, there would be a rationale for another program to offer comparable levels of assistance to the latter group.[9]

Thus on both vertical and horizontal equity grounds, we may construct a rationale for conditional (i.e. targetted) assistance to fill in gaps left by other programs. This line of reasoning also leads us to certain criteria the assistance program should meet. First, when considering both vertical and horizontal equity issues, the definition of income is obviously crucial. In particular, the income levels of homeowners should be defined to include the imputed income they receive from their equity in their homes. Two families each with cash incomes of, say, $15,000 per year are in substantially different economic circumstances if one family owns a dwelling with a significant market value and the other rents.

Secondly, it seems reasonable, in the context of the discussion, to argue that the conditions placed on the program should be only as restrictive as necessary to define the target population. We have already seen that program design restrictions are likely to distort private decisions and thereby create allocational inefficiencies. We now conclude that these restrictions may also result in inefficient redistribution and vertical and horizontal equity "gaps" in the system.

Finally, to conclude this section, it is instructive to recall an earlier development in the literature of economics. The "theory of the second best" addressed the question of attempting to achieve allocational inefficiency in one sector of an economy, when inefficiencies that could not be removed existed in another sector.[10] The argument made was that promoting "first-best" allocational efficiency in one sector may be an inferior solution, given the presence of other non-optimal allocations. A preferred solution may be one of establishing offsetting or counter-balancing allocations in the target sector that in isolation would be seen as inefficient.

The parallel between the theory of the second-best and the discussion of equity in this section is noteworthy. We have suggested a similar argument for second-best redistributional programs.

Both second-best arguments are vulnerable to the same criticism. On one level second-best solutions promote efficiency (or equity). However, when considered on a more general level, these solutions tend to move the economy as a whole further away from an optimal allocation of resources (or efficient system of redistribution). They place more obstacles in the way of achieving the ideal solution. Even if we have no real expectation of ever reaching the ideal, this criticism may be troubling. Pervasive resort to second-best solutions throughout the economic system may distort the analysis and consideration of future policy issues in both the efficiency and equity dimensions.

Housing Equity as an Objective

The perspective we took in the previous section was that society has an equity goal which it may choose to pursue by means of general income

transfers and in-kind or conditional redistribution programs. An alternative viewpoint we consider in this section is that society has a number of equity objectives, and pursuit of the "appropriate" distribution of income is only one. Society may have separate and distinct equity objectives with respect to certain categories of goods and services.[11] Moreover, the notion of what is equitable may vary across categories.

Three areas in which there appear to be distinct societal equity objectives are health care services, education (at least through the secondary level), and housing. The existence of firmly entrenched public policies in each of these areas - policies that in some cases have a long history - implies that a strong societal consensus also exists. Certainly whenever public debates arise over potential policy or program changes in these areas, equity is one of the (and in some cases the dominant) central issues. We need only to recall discussions concerning public support for private schools in the area of education; heated arguments over extra billing and deterrent fees in health care; and public debates about rent controls and high mortgage rates in the housing area. Equity is central to each.

Let us accept then, at least for the purpose of this discussion, that society may wish to pursue an equity goal in the area of housing, and that this goal may be quite separate from and different than any equity goal relating to the overall distribution of income.[12] In-kind or conditional housing programs would then have a clear role to play.

What form should these programs take? A strong case still remains for a program that would meet the housing equity objective with as few

private decision-distorting restrictions as possible. A likely candidate would be a general shelter allowance (i.e. a payment only applicable to housing) related inversely to income and payable to renters and homeowners alike. A possible alternative would be to offer separate programs to renters and homeowners that offered comparable levels of assistance to each group so as to promote horizontal and vertical equity. On the rental side we might cite public housing, rent supplements, rental RRAP and (at least for some) rent controls.

III. RRAP

We have thus far examined the efficiency and equity arguments that may provide a rationale for government assistance for residential rehabilitation. We saw that, in some instances, the case to be made in support of intervention appeared weak, or at least remained to be established empirically. We now turn to RRAP itself. Our purpose in this part of the paper is to compare the design features of RRAP with these possible rationales (doubts being set aside for the moment) and the type of program they suggest.

For purposes of this part of the discussion, four characteristics of RRAP are relevant. Very briefly, they are:

1) public funds are loaned to homeowners for purposes of home renovation;
2) the type of renovations eligible for assistance is restricted;
3) to be eligible a dwelling unit must be located in a specified geographical area; and
4) a portion of the loan is forgivable and the forgivable (or grant) amount is inversely related to income.

The discussion of this part of the paper is summarized in Table 1. While it probably does some violence to subtleties, Table 1 compares the four design features of RRAP with the potential criteria or rationales for government assistance to dwelling rehabilitation discussed in Parts I and II. A simple dichotomous judgment is made as to whether each design feature is broadly consistent with each possible rationale.

Efficiency Rationales

In Part I we discussed possible capital market imperfections and the types of interventions that would be required in their presence. How does RRAP stack up against this prescription? Note that we are, at the moment, considering RRAP only from the perspective of possible capital market imperfections. First, there is no rationale for making a portion of the RRAP loan forgivable. Correcting capital market inefficiencies only requires that credit be made available at an appropriate rate.[13] Secondly, there is no rationale for the specification of eligible geographic areas. A capital market imperfection would not likely be regionally specific, at least not in such micro terms. All homeowners should be eligible for this form of assistance. Table 1 reflects these main conclusions.

In the case of housing externalities, we saw that loans in aid of renovation were appropriate. However, contrary to the RRAP design, no rationale exists for geographic restrictions or forgivable loans related to income.

If the problem is one of inadequate information about the impact of rehabilitation, the restriction of aid under RRAP to five categories of renovation may be quite appropriate, assuming policy makers and program administrators possess better information about housing attributes than the participants in the market. However, if this argument formed the rationale for renovation assistance, the program should not be tied to income levels nor restricted to selected geographical areas.

Equity Rationales

In Part II we discussed two approaches to the issue of equity. The first was a "second best" argument for conditional or restricted assistance given the existence of other conditional programs.

Working within this framework, what judgments can we reach concerning RRAP? First, it appears that no allowance has been made for homeowners' equity in the definition of income used to determine loan-forgiveness eligibility. Certainly no explicit requirements to this effect exist; however, it is possible that housing equity was implicitly included when determining the income eligibility scale. Secondly, the design restrictions are likely too severe. There is no obvious equity rationale for the geographic restrictions nor for the limits on the types of renovation that are deemed eligible for assistance. Indeed, if the objective is to subsidize low income homeowners, there is no clear reason why the aid should be linked to renovation at all. Are low income homeowners who renovate more deserving than those who do not, but have the same or lower incomes? These conclusions are again summarized in Table 1.

The second approach to equity was in terms of a housing goal by itself. The conclusion with respect to RRAP is similar. If RRAP is to be viewed as a redistributive program in this context, there would appear to be no rationale for restricting eligibility to residents of pre-selected areas or for tying it to the carrying out of a renovation project. General assistance to all low income (appropriately defined) homeowners is a preferable alternative to pursue an equity objective however it is conceived.

TABLE 1

COMPARISON OF RRAP DESIGN CHARACTERISTICS WITH EVALUATION CRITERIA FOR PUBLIC SECTOR HOUSING RENOVATION ASSISTANCE

Evaluation Criteria	RRAP Design Criteria			
	Govt. loans for Home Renovations	Specified renovations eligible for assistance	Specified geographical areas are eligible	Forgivable loan keyed to income
I. Allocational Efficiency				
1. Capital Market Imperfections				
a) general problem re: housing	+	o	-	-
b) renovation problem	+	o	-	-
2. Housing Externalities				
a) Social cost < private cost) e.g. labour)	+	o	-	-
b) Neighbourhood effects	+	o	-	-
3. Information	+	+	-	-
II. Equity				
1. "Second best" redistribution	o	-	-	+
2. Housing equity as a goal	o	-	-	+

Key: +: RRAP design characteristic broadly consistent with the criterion.

-: RRAP design characteristic broadly inconsistent with the criterion.

o: no strong link between design characteristic and the criterion.

Note: The table is constructed on the assumption that the particular efficiency or equity rationale has, in fact, been established. As the text makes clear (e.g. the discussion of capital market imperfections), this may not be the case.

CONCLUSION

Several of the factors discussed in this paper may establish a basis in principle for public assistance for housing renovation. Further investigation and in some cases empirical analysis would be required to establish the rationales firmly and to indicate exact characteristics of any interventions.

In terms of any one of the evaluation criteria, RRAP is found wanting in that one or more of its design characteristics are inconsistent with that criterion. This conclusion, which is clearly illustrated in Table 1, is neither surprising nor unique to RRAP. Like virtually all government programs, RRAP is established to pursue several objectives. These may be economic, social and political goals. In general, they will be, at least in part, inconsistent with one another. Accordingly, any program designed with more than one goal in mind will be forced to trade off a degree of attainment of one objective in exchange for another.

The implications and dangers for evaluation exercises are clear. One must design evaluation criteria sufficiently sophisticated and complex to reflect the diverse goals that motivate the policy or program. A program will always be deficient when evaluated only in terms of one simple goal.

The above argument is not to be interpreted as a rationalization for any program that exists. Even when adopting a comprehensive approach to evaluation, some design characteristics or other aspects of a program may not be supportable. For example, Table 1 indicates that the prior specification of eligible geographic areas for RRAP is not consistent with any of the efficiency or equity rationales that may justify the overall program.

NOTES

1. In this discussion we refer directly only to the owner-occupied housing market. However, because of the linkages between this market and the rental housing market, our analysis should permit us to draw some inferences about the latter. "Third" market variations (e.g. co-operatives) are not addressed.

2. A sixth improvement eligible for RRAP financing is the adaptation of a dwelling for access by handicapped persons. We do not consider this category because it appears to be motivated by an entirely separate set of considerations.

3. Similar interpretations follow for γ_w, α_s, and α_w.

4. As examples see the collection of readings assembled for a recent symposium at CMHC, "Background Readings for a Symposium on Mortgage Instruments for the 1980s", January 1982.

5. It is sometimes argued that the resource cost of renovating is less than that of constructing new housing. It is not clear what this statement means; nevertheless, it is used by some adovates to justify public intervention in aid of renovation. This argument is put forward erroneously as an example of an externality. The cost of providing housing services by renovating relative to new construction is not the issue. The relevant consideration is whether the relative costs differ for private and public decision-makers.

6. A similar argument, applied to the rental housing market, was an early illustration of the "prisoners' dilemma". See, for example, O.A. Davis and A.B. Whinston, "Economic Problems in Urban Renewal", in E.S. Phelps (ed.), Private Wants and Public Needs (New York: Norton, 1962).

7. See, for example, Bruce W. Headey, Indicators of Housing Satisfaction: A Castlemilk Pilot Study (Survey Research Centre, University of Strathclyde, Occ. Paper No. 10, 1972); J. B. Lansing and R. W. Marans, "Evaluation of Neighbourhood Quality", Journal of American Institute of Planners, Vol. 35, 1969, pp. 195-99; M. Menchik, "Residential Environmental Preferences and Choice: Empirical Validating Preference Measures", Environmental Planner, Vol. 4, 1972, pp.445-48; P. N. Troy, "Residents and their Preferences: Property Prices and Residential Quality", Regional Studies, Vol. 7, 1973, pp. 183-92.

8. See, for example, George Fallis, Housing Programs and Income Distribution in Ontario (Toronto: Ontario Economic Council, 1980).

9. One may argue that the first set of subsidies should be removed and replaced with a general income transfer to all individuals and families meeting particular criteria. However, our discussion in this section is built on the presumption that the existing programs will not be altered because of political, jurisdictional or other factors.

10. See R.A. Lipsey and K. Lancaster, "The General Theory of Second Best", Review of Economic Studies, 1956, No. 1.

11. We are concerned here with equity across individuals and families. There are also notions of equity with respect to geographical region, ethnicity (e.g. Native peoples), and demography (e.g. the aged). Although not entirely separable from individual equity, the focus here is not on the group or region.

12. Another way to think about this point is in terms of the externality argument in Part I of this paper. Why would we, as a society, wish to see housing services distributed more equally than income in general? In other words, why would we not be prepared to redistribute purchasing power (income) in accordance with some prior prescription and simply allow the housing market to work on its own? The answer would appear to be as follows: the prevailing view is that there are gains to society as a whole from a more equal distribution of housing (or health or educational) services than would obtain in an unfettered housing market, even if the overall income distribution was acceptable. This response directly implies the existence of housing (or health or education) externalities. In public finance textbooks, these commodities are defined as "merit goods" because community interests or values override individual preferences. See R.A. Musgrave and P. Musgrave, Public Finance in Theory and Practice, Third Edition, (New York: McGraw-Hill, 1980).

13. One could design a program in which a portion of the loan was made forgivable or a grant was extended in lieu of an interest rate adjustment. However, in this type of program there would be no rationale for tying the amount of the forgivable loan or grant to the homeowner's income.